DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY OF THE ARMY
INSTALLATIONS AND ENVIRONMENT
110 ARMY PENTAGON
WASHINGTON, DC 20310-0110

27 APR 2007

MEMORANDUM FOR: SEE DISTRIBUTION

SUBJECT: Sustainable Design and Development Policy Update – Life-Cycle Costs

1. References.

a. Memorandum, DASA (I&H), 5 Jan 06, subject: Sustainable Design and Development Policy Update – SPiRiT to LEED Transition.

b. AR 415-15, Army Military Construction and Non-Appropriated Funded Construction Program Development and Execution, 12 Jun 06.

c. Energy Policy Act of 2005, 8 Aug 05.

d. DoDI 4170.11, Installation Energy Management, 22 Nov 05.

e. Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings, Memorandum of Understanding, 6 Mar 06.

f. Federal Register, Vol. 71, No. 232, Rules and Regulations, 4 Dec 06.

g. Executive Order 13423, Strengthening Federal Environmental, Energy, and Transportation Management, 26 Jan 07.

2. Purpose. The purpose of this memorandum is to update the sustainable design and development (SDD) policy for Army facilities. Life-cycle cost analyses will be completed to determine the best capital asset investments to reduce the total ownership cost of facilities; improve energy efficiency and water conservation; provide safe, healthy and productive built environments; promote sustainable environmental stewardship; and reduce environmental impact/footprint of operations in accordance with AR 415-15. Life-cycle cost means the total cost related to energy conservation measures of owning, operating, and maintaining a building over its useful life as determined in accordance with 10 CFR part 436 (reference Federal Register). This policy applies worldwide to all construction activities on permanent Army installations, Army Reserve, Army Readiness Centers, and Armed Forces Reserve Centers, regardless of funds source.

3. Policy.

a. New Construction. No change is made to existing policy requiring all vertical construction projects with climate control, beginning with the FY08 military construction

program, to achieve a minimum of the Silver level of the Leadership in Energy and Environmental Design (LEED®) for New Construction per the U.S. Green Building Council (USGBC) rating system. Horizontal construction (e.g. ranges, roads, and airfields) will incorporate sustainable design features to the maximum extent possible. The installation Director of Public Works or the Reserve Component equivalent, supporting Engineer District, designer of record, and/or the prime construction contractor will jointly verify the final LEED® score and rating. USGBC certification is not required.

b. Family Housing. The Army anticipates adopting LEED® Homes for scoring residential housing. In the interim, all Army Family Housing new construction projects and homes built under the Residential Communities Initiative will attain a minimum of the Army Sustainable Project Rating Tool (SPiRiT) GOLD and Energy Star® Qualified New Homes (at least 15 percent more energy efficient than homes built to the 2004 International Residential Code). The installation Director of Public Works, supporting Engineer District, designer of record, and/or the prime construction contractor will jointly verify the final SPiRiT score and rating as well as verification of Energy Star® Qualified New Homes features documentation. Third party rating using the Home Energy Rating System is not required.

c. Existing Buildings. The Army is determining the appropriate rating level of LEED® Existing Buildings and will issue additional policy once completed. In the interim, beginning in FY08, all major renovation and repair projects exceeding $7.5 million (requiring congressional notification) shall incorporate sustainable design features where life-cycle cost effective to achieve a minimum of the Certified level of the LEED® Existing Buildings rating system. The installation Director of Public Works or the Reserve Component equivalent, supporting Engineer District, designer of record, and/or the prime construction contractor will jointly verify the final LEED® score and rating. USGBC certification is not required.

d. Programming. Documenting SDD, EPAct05, and EO 13423 costs on DD Form 1391, Military Construction Project Data, in accordance with DoDI 4170.11, will commence beginning with the FY09 Military Construction program. Under the primary facilities cost, a separate line item will be added labeled "SDD & EPAct05" (under DD Form 1391 category code 00005). The cost will include the actual costs associated with achieving this policy. If the costs are undetermined at the time the DD Form 1391 is developed, they will be programmed at 2 percent of the primary facility cost (facilities with climate control systems only) until they are determined. When the costs exceed 2 percent, an explanation will be provided in the description of the proposed construction under block 10 of the DD Form 1391 describing the SDD, EPAct05 and/or EO 13423 features (such as distributed generation systems including renewable systems, solar electric, solar lighting, geo (or ground coupled) thermal, wind turbines, biomass, as well as other generation systems such as fuel cell, cogeneration, or highly efficient alternatives) included in the design. For DD Forms 1391 with multiple primary facilities, the SDD & EPAct05 primary line item will include sub-line items for each facility's SDD & EPAct05 costs.

e. Objectives. EPAct05 and the new EO have fundamentally changed the way we approach efficient design of our facilities. Value engineering studies in accordance with AR 415-15 shall incorporate SDD principles and maximize points in the water consumption reduction and efficiencies and energy optimizing energy performance. Opportunities to include renewable energy will be investigated for each project. To accomplish these objectives all new construction projects that have not completed concept design prior to the issuance of this policy memorandum shall be designed to reduce the energy consumption level by 30 percent compared to the baseline building performance rating per the American Society of Heating, Refrigerating, and Air Conditioning Engineers, Inc., (ASHRAE) and the Illuminating Engineering Society of North America (IESNA) Standard 90.1-2004, Energy Standard for Buildings Except Low Rise Residential. Major renovations and repair projects that have not completed concept design prior to the issuance of this policy memorandum shall be designed to reduce the energy consumption level by 20 percent below pre-renovations 2003 baseline. If it is determined through life-cycle cost analysis that these energy consumption reductions levels cannot be achieved, successive life-cycle cost analyses at 5 percent lower energy consumption levels will be completed to determine the appropriate percent energy consumption reduction. Waivers from the mandated requirements for SSD, EPAct05, or EO 13423, to include not meeting mandatory energy consumption reduction levels of 30 percent for new construction and 20 percent for major renovations and repair projects, shall be obtained following procedures in Appendix D of AR 415-15, regardless of funds source (this includes BRAC-funded construction).

f. Conclusion. Immediate and sustained action is necessary to reduce demands on limited resources. High performance buildings will reduce the total ownership cost of facilities; improve energy efficiency and water conservation; provide safe, healthy, and productive built environments; promote sustainable environmental stewardship; and reduce environmental impact/footprint of operations. I appreciate your support in the implementation of this policy.

William T. Birney
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(Installations and Housing)
OASA(I&E)

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